

For Occupational Death and Disability
And Retiree Medical Benefits

Actuarial Valuation Report As of June 30, 2012

July 2013



Submitted By:
Buck Consultants
1200 Seventeenth Street, Suite 1200
Denver, CO 80202

### **Table of Contents**

Letter of C	ertification	
<b>Executive S</b>	Summary	• • • • • • • • • • • • • • • • • • • •
Comparati	ve Summary of Key Actuarial Valuation Results	
Section 1:	Actuarial Funding Results	
1.1	Actuarial Liabilities and Normal Cost	
1.2	Actuarial Contributions	10
1.3	Actuarial Gain / (Loss)	19
1.4	History of UAAL and Funded Ratio.	20
Section 2:	Plan Assets	2
2.1	Summary of Fair Value of Assets	22
2.2	Changes in Fair Value of Assets	23
2.3	Actuarial Value of Assets	24
2.4	Historical Rate of Return	20
Section 3:	Accounting Information	2
3.1	Schedule of Funding Progress	28
3.2	Schedule of Employer Contributions	29
3.3	Notes to Trend Data	30
3.4	Solvency Test	3
Section 4:	Member Data	34
4.1	Summary of Members Included	35
4.2	Age and Service Distribution of Active Members	30
4.3	Member Data Reconciliation	3′
4.4	Schedule of Active Member Data	38
Section 5:	Basis of the Actuarial Valuation	39
5.1	Summary of Plan Provisions and Changes in Benefits	40
5.2	Description of Actuarial Methods and Valuation Procedures	43
5.3	Summary of Actuarial Assumptions and Changes	4:





July 19, 2013

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

#### Certification of Actuarial Valuation

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan as of June 30, 2012 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2012. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the Plan.

The State of Alaska Public Employees' Retirement System DCR Plan is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for the State of Alaska Public Employees' Retirement System DCR Plan is to pay required contributions that remain level as a percent of PERS DCR Compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of PERS DCR Compensation over a closed 25-year period. This objective is currently being met and is projected to continue to be met.



The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration
July 19, 2013
Page 2

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed in 2010. A review of the healthcare assumptions was performed for this actuarial valuation and changes were made to the healthcare cost trend rates and the per capita claims cost rates effective June 30, 2012 to better reflect expected future healthcare experience. Changes were also made to expected healthcare benefit participation, lower initial relative values of DCR healthcare, and increased employer sharing of medical cost trend as a result of recent plan decision discussions. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 5 beginning on page 39.

The assumptions and methods used to determine the Annual Required Contributions (ARC) of the Employers to the State of Alaska Public Employees' Retirement System DCR Plan as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the Schedule of Funding Progress, Schedule of Employer Contributions, and trend data schedules under GASB Nos. 25 and 43 that are included in the Financial Section of the CAFR. We have also prepared the member data tables shown in Section 4 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions and solvency test for the Actuarial Section of the CAFR.

The undersigned are Enrolled Actuaries, a Fellow and an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

**BUCK CONSULTANTS, LLC** 

David H. Slockinsky

David H. Slishinsky, ASA, EA, MAAA, FCA

Principal, Consulting Actuary

Lee James, FSA, EA, MAAA, FCA Director, Consulting Actuary



The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration
July 19, 2013
Page 3

The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms her qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.

Melissa Bissett, FSA, MAAA

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Senior Consultant, Health & Productivity



### Executive Summary

#### Overview

The State of Alaska Public Employees' Retirement System DCR Plan provides occupational death & disability and retiree medical benefits to eligible members hired after June 30, 2006. The Commissioner of the Department of Administration is responsible for administering the Plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the Plan. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of June 30, 2012.

### **Purpose**

An actuarial valuation is performed on the retirement plan annually as of the beginning of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

- 1. To determine the Employer contribution necessary to meet the Board's funding policy for the Plan:
- 2. To disclose the funding assets and liability measures as of the valuation date;
- 3. To disclose the accounting measures for the Plan required by GASB Nos. 25 and 43 as of the end of the last fiscal year;
- 4. To review the current funded status of the Plan;
- 5. To compare actual and expected experience under the Plan during the last fiscal year;
- 6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

The actuarial valuation provides a "snapshot" of the funded position of the PERS DCR Plan based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date.

#### **Funding Status**

The funding status is a measure of the progress that has been made in funding the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date. A comparative summary of the funding ratio from the prior and current actuarial valuations follows:

Funding Status as of June 30 <sup>1</sup>	2011	2012		
(a) Accrued Liability <sup>2</sup>	\$ 13,251	\$	46,921	
(b) Valuation Assets <sup>2</sup>	 19,058		24,915	
(c) Unfunded Accrued Liability <sup>2</sup> , (a) – (b)	\$ (5,807)	\$	22,006	
(d) Funding Ratio based on Valuation Assets, (b) $\div$ (a)	143.8%		53.1%	
(e) Fair Value of Assets <sup>2</sup>	\$ 19,724	\$	24,553	
(f) Funding Ratio based on Fair Value of Assets, (e) ÷ (a)	148.8%		52.3%	

<sup>&</sup>lt;sup>1</sup> Includes occupational death & disability and retiree medical benefits.

<sup>&</sup>lt;sup>2</sup> In thousands.



### Executive Summary (cont'd)

As shown previously, the funding ratio based on valuation assets as of June 30, 2012 has decreased from 143.8% to 53.1%, a decrease of 90.7%. The total calculated Employer contribution rate has increased from 0.77% of payroll for FY14 to 1.96% for FY15, an increase of 1.19%. The reasons for the change in the funded status and calculated contribution rate are explained below.

#### (1) Retiree Medical Costs and Assumptions

Please refer to the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2012 for a full description of the assumptions and costs of the retiree medical plan. Adjustments from these costs and assumptions are described in this report.

Due to the lack of experience for the DCR Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2012 for PERS with some adjustments to reflect the differences between the DCR medical plan and the DB medical plan. These differences include different coverage levels and an indexing of the retiree out-of-pocket dollar amounts. To account for anticipated plan design features, including network steerage, higher initial copays, deductibles and out-of-pocket limits, FY12 claims costs were reduced 11.9% for medical and 7.1% for prescription drugs. Retiree out-of-pocket amounts were indexed 0.2% each year to reflect the effect of the deductible leveraging on trend, putting the annual projected trend closer to the ultimate trend rate. Participation rates were reduced to reflect the proportion of retirees expected to have access to alternative options in the Medicare market as well as the time from retirement to Medicare-eligibility where a member pays full cost.

#### (2) Investment Experience

The approximate FY12 investment return based on fair value was 2.0% compared to the expected investment return of 8.00%. This resulted in a loss of approximately \$1,315 thousand to the Plan from investment experience. The asset valuation method recognizes 20 percent of this loss (\$263 thousand) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY08 investment loss, 20 percent of the FY10 investment loss and 20 percent of the FY11 investment gain were recognized this year. The approximate FY12 asset return based on actuarial value was 6.9% compared to the expected asset return of 8.00%.

#### (3) Salary Increase

During the period from June 30, 2011 to June 30, 2012, salary increases for continuing active members were slightly less than anticipated in the valuation assumptions.

#### (4) Demographic Experience

The number of active members increased 14.88% from 10,965 at June 30, 2011 to 12,597 at June 30, 2012. The number of active members is growing annually since the opening of the DCR Plan to new entrants as of July 1, 2006. The average age of active members increased from 38.76 to 39.31 and average credited service increased from 2.02 to 2.36 years.



### Executive Summary (cont'd)

#### (5) Changes in Methods Since the Prior Valuation

There have been no changes in asset or valuation methods since the prior valuation.

#### (6) Changes in Assumptions Since the Prior Valuation

There have been changes in actuarial assumptions since the prior valuation regarding healthcare cost trend rates and the DCR retiree medical plan adjustments. The updated healthcare cost trend assumption reflects differences in Medicare eligible and non-Medicare eligible medical costs, maintains a distinct prescription drug cost trend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated member contributions to reflect the new non-Medicare and pharmacy benefit cost trend on a weighted average basis.

To account for anticipated plan design features, FY12 claims costs adjustments were changed from 5.9% for medical and 0.7% for prescription drugs to 11.9% and 7.1% respectively. Retiree out-of-pocket amounts were indexed 0.2% each year, compared to 4.8% last year. Participation rates were reduced to reflect the proportion of retirees expected to have access to alternative options in the Medicare market as well as the time from retirement to Medicare-eligibility where a member pays full cost.

These assumption changes resulted in an increase in the actuarial accrued liability of \$28.3 million and an increase in the total employer contribution rate of 1.14%.

#### (7) Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.



### Comparative Summary of Key Actuarial Valuation Results

atal Employer Contribution Dates for

Total Employer Contribution Rates for Occupational Death & Disability for Fiscal Year Ending:	2014	2015
(a) Employer Normal Cost Rate	0.35%	0.37%
(b) Past Service Cost Rate	(0.06)%	<u>(0.07)%</u>
(c) Total Employer Contribution Rate, (a) + (b), not less than 0%	0.29%	0.30%
Total Employer Contribution Rates for Retiree Medical for Fiscal Year Ending:	2014	2015
(a) Employer Normal Cost Rate	0.49%	1.39%
(b) Past Service Cost Rate	<u>(0.01)%</u>	0.27%
(c) Total Employer Contribution Rate, $(a) + (b)$ , not less than $0\%$	0.48%	1.66%
Total Employer Contribution Rates for Fiscal Year Ending:	2014	2015
(a) Total Employer Contribution Rate	0.77%	1.96%
(b) Board Adopted Total Employer Contribution Rate	0.77%	1.96%

The exhibit below shows the historical Board adopted employer contribution rates for the DCR Plan.

		Total Employer Contribution Rate							
Valuation Date	Fiscal Year	Occupational Death & Disability (PF / Others)	Retiree Medical	Total (PF / Others)					
N/A	FY07	0.40% / 0.30%	1.75%	2.15% / 2.05%					
N/A	FY08	1.33% / 0.58%	0.99%	2.32% / 1.57%					
N/A	FY09	1.33% / 0.58%	0.99%	2.32% / 1.57%					
June 30, 2007	FY10	1.33% / 0.30%	0.83%	2.16% / 1.13%					
June 30, 2008	FY11	1.18% / 0.31%	0.55%	1.73% / 0.86%					
June 30, 2009	FY12	0.97% / 0.11%	0.51%	1.48% / 0.62%					
June 30, 2010	FY13	0.99% / 0.14%	0.48%	1.47% / 0.62%					
June 30, 2011	FY14	1.14% / 0.20%	0.48%	1.62% / 0.68%					
June 30, 2012	FY15	1.06% / 0.22%	1.66%	2.72% / 1.88%					

Contribution rates are based on salary for DCR Plan members only.

The rates shown above are for funding purposes which differ from the Annual Required Contribution for GASB No. 43 reporting purposes. Under GASB No. 43, retiree medical liabilities are gross of the retiree drug subsidy and based on a discount rate in accordance with GASB parameters.



### Comparative Summary of Key Actuarial Valuation Results (cont'd)

#### **Summary of Actuarial Gain/(Loss)**

The following table shows the gain/(loss) on total accrued liability (in thousands):

		ļ	Pension Pension	<u>H</u>	<u>ealthcare</u>	<u>Total</u>	% of Expected
-	Retirement Experience	\$	0	\$	0	\$ 0	0.00%
-	Termination Experience		(44)		(784)	(828)	(1.74)%
-	Active Mortality Experience		667		5	672	1.41%
-	Inactive Mortality Experience		0		0	0	0.00%
-	Disability Experience		989		47	1,036	2.17%
-	New Entrants		(119)		(729)	(848)	(1.77)%
-	Rehires		(14)		(140)	(154)	(0.32)%
-	Other Demographic Experience <sup>1</sup>		272		(389)	(117)	(0.25)%
-	Salary Increases		32		N/A	32	0.07%
-	Medical Claims Costs		N/A		959	959	2.01%
-	Total	\$	1,783	\$	(1,031)	\$ 752	1.58%

A gain on total accrued liability is favorable to the Plan. A loss is unfavorable.

<sup>&</sup>lt;sup>1</sup> Reflects data and programming changes



## **Section 1**

**Actuarial Funding Results** 



### Section 1.1

## Actuarial Liabilities and Normal Cost – Peace Officer/Firefighter (\$'s in 000's)

As of June 30, 2012	of F	ent Value Projected enefits	Accrued (Past Service) Liability		
Active Members					
Occupational Death Benefits	\$	1,406	\$	42	
Occupational Disability Benefits		7,655		1,495	
Medical and Prescription Drug Benefits		13,078		4,923	
Medicare Part D Subsidy		(1,723)		(650)	
Subtotal	\$	20,416	\$	5,810	
Benefit Recipients					
Survivor Benefits	\$	197	\$	197	
Disability Benefits		0		0	
Medical and Prescription Drug Benefits		0		0	
Medicare Part D Subsidy		0		0	
Subtotal	\$	197	\$	197	
Total	\$	20,613	\$	6,007	
Total Occupational Death & Disability	\$	9,258	\$	1,734	
Total Retiree Medical, Net of Part D Subsidy	\$	11,355	\$	4,273	
Total Retiree Medical, Gross of Part D Subsidy	\$	13,078	\$	4,923	
As of June 30, 2012			ı	Normal Cost	
Active Members					
Occupational Death Benefits			\$	147	
Occupational Disability Benefits			*	615	
Medical and Prescription Drug Benefits				1,111	
Medicare Part D Subsidy				(147)	
Subtotal			\$	1,726	
Total			\$	1,726	
Total Occupational Death & Disability			\$	762	
Total Retiree Medical, Net of Part D Subsidy			\$	964	
Total Retiree Medical, Gross of Part D Subsidy			\$	1,111	



### Section 1.1 (cont'd)

## Actuarial Liabilities and Normal Cost – Others (\$'s in 000's)

As of June 30, 2012	of F	ent Value Projected enefits	Accrued (Past Service) Liability		
Active Members					
Occupational Death Benefits	\$	5,509	\$	302	
Occupational Disability Benefits		5,712		376	
Medical and Prescription Drug Benefits		96,567		46,875	
Medicare Part D Subsidy		(13,641)		(6,639)	
Subtotal	\$	94,147	\$	40,914	
Benefit Recipients					
Survivor Benefits	\$	0	\$	0	
Disability Benefits		0		0	
Medical and Prescription Drug Benefits		0		0	
Medicare Part D Subsidy		0		0	
Subtotal	\$	0	\$	0	
Total	\$	94,147	\$	40,914	
Total Occupational Death & Disability	\$	11,221	\$	678	
Total Retiree Medical, Net of Part D Subsidy	\$	82,926	\$	40,236	
Total Retiree Medical, Gross of Part D Subsidy	\$	96,567	\$	46,875	
As of June 30, 2012				Normal Cost	
Active Members					
Occupational Death Benefits			\$	848	
Occupational Disability Benefits				880	
Medical and Prescription Drug Benefits				9,809	
Medicare Part D Subsidy				(1,393)	
Subtotal			\$	10,144	
Total			\$	10,144	
Total Occupational Death & Disability			\$	1,728	
Total Retiree Medical, Net of Part D Subsidy			\$	8,416	
Total Retiree Medical, Gross of Part D Subsidy			\$	9,809	



### Section 1.1 (cont'd)

## Actuarial Liabilities and Normal Cost – All Members (\$'s in 000's)

As of June 30, 2012	of	sent Value Projected Benefts	Accrued (Past Service) Liability		
Active Members					
Occupational Death Benefits	\$	6,915	\$	344	
Occupational Disability Benefits		13,367		1,871	
Medical and Prescription Drug Benefits		109,645		51,798	
Medicare Part D Subsidy		(15,364)		(7,289)	
Subtotal	\$	114,563	\$	46,724	
Benefit Recipients					
Survivor Benefits	\$	197	\$	197	
Disability Benefits		0		0	
Medical and Prescription Drug Benefits		0		0	
Medicare Part D Subsidy		0		0	
Subtotal	\$	197	\$	197	
Total	\$	114,760	\$	46,921	
Total Occupational Death & Disability	\$	20,479	\$	2,412	
Total Retiree Medical, Net of Part D Subsidy	\$	94,281	\$	44,509	
Total Retiree Medical, Gross of Part D Subsidy	\$	109,645	\$	51,798	
As of June 30, 2012				Normal Cost	
Active Members					
Occupational Death Benefits			\$	995	
Occupational Disability Benefits				1,495	
Medical and Prescription Drug Benefits				10,920	
Medicare Part D Subsidy				(1,540)	
Subtotal			\$	11,870	
Total			\$	11,870	
Total Occupational Death & Disability			\$	2,490	
Total Retiree Medical, Net of Part D Subsidy			\$	9,380	
Total Retiree Medical, Gross of Part D Subsidy			\$	10,920	



### Section 1.2

## Actuarial Contributions - FY15 - Peace Officer/Firefighter (\$'s in 000's)

Normal Cost Rate		upational eath & sability	Retiree Medical		Total	
(1) Total Normal Cost	\$	762	\$	964	\$	1,726
(2) DCR Plan Member Salaries Projected for FY13		66,102		66,102		66,102
(3) Employer Normal Cost Rate, (1) / (2)		1.15%		1.46%		2.61%
Past Service Rate						
(1) Accrued Liability	\$	1,734	\$	4,273	\$	6,007
(2) Valuation Assets		2,580		1,514 <sup>1</sup>		4,094
(3) Total Unfunded Liability, (1) – (2)	\$	(846)	\$	2,759	\$	1,913
(4) Funded Ratio based on Valuation Assets		148.8%		35.4%		68.2%
(5) Past Service Cost Amortization Payment	\$	(58)	\$	172		\$114
(6) DCR Plan Member Salaries Projected for FY13		66,102		66,102		66,102
(7) Past Service Cost Rate, (5) / (6)		(0.09)%		0.26%		0.17%
Total Employer Contribution Rate, not less than 0%		1.06%		1.72%		2.78%

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

## Total Employer Contribution Rate as Percent of Total Payroll

· · · · · · · · · · · · · · · · · · ·			
(1) Total Normal Cost	\$ 762	\$ 964	\$ 1,726
(2) Total DB and DCR Plan Member Salaries Projected for FY13	272,033	272,033	272,033
(3) Employer Normal Cost Rate, (1) / (2)	0.28%	0.35%	0.63%
(4) Past Service Cost Amortization Payment	\$ (58)	\$ 172	\$ 114
(5) Past Service Cost Rate, (4) / (2)	(0.02)%	0.06%	0.04%
(6) Total Employer Contribution Rate, (3) + (5)	0.26%	0.41%	0.67%

<sup>&</sup>lt;sup>1</sup> Allocated based on retiree medical accrued liability.



Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - Peace Officer/Firefighter (cont'd) (\$'s in 000's)

### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

	Amortizat	Amortization Period Balances			Amortization Period		Balances				
Charge	Date Created	Years Left		Initial	Outs	standing	_	nning-of- Payment			
Initial Unfunded Liability	06/30/2007	20	\$	(100)	\$	(105)	\$	(8)			
FY08 Gain	06/30/2008	21		(586)		(611)		(43)			
Change in Assumptions	06/30/2009	22		(104)		(108)		(7)			
FY09 Loss	06/30/2009	22		446		461		31			
Change in Assumptions	06/30/2010	23		79		81		5			
FY10 Gain	06/30/2010	23		(282)		(288)		(19)			
FY11 Loss	06/30/2011	24		73		73		5			
FY12 Gain	06/30/2012	25		(349)		(349)		(22)			
Total					\$	(846)	\$	(58)			

#### Schedule of Past Service Cost Amortizations - Retiree Medical

	Amortization Period			Bala	_			
Charge	Date Created Years Left		Initial O			standing	Beginning-of- Year Payment	
Initial Unfunded Liability	06/30/2007	20	\$	(21)	\$	(23)	\$	(2)
Change in Assumptions	06/30/2008	21		17		17		1
FY08 Gain	06/30/2008	21		(62)		(66)		(5)
Change in Assumptions	06/30/2009	22		(8)		(8)		(1)
FY09 Gain	06/30/2009	22		(38)		(39)		(3)
Change in Assumptions	06/30/2010	23		41		41		3
FY10 Gain	06/30/2010	23		(46)		(46)		(3)
FY11 Loss	06/30/2011	24		70		71		5
Change in Assumptions	06/30/2012	25		3,085		3,085		194
FY12 Gain	06/30/2012	25		(273)		(273)		(17)
Total					\$	2,759	\$	172



Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - Peace Officer/Firefighter (cont'd) (\$'s in 000's)

#### Schedule of Past Service Cost Amortizations - Total

	Amortizati	on Period	Balances					
Charge	Date Created	Years Left		Initial	(	Outstanding		ginning-of- ar Payment
Initial Unfunded Liability	06/30/2007	20	\$	(121)	\$	(128)	\$	(10)
Change in Assumptions	06/30/2008	21		17		17		1
FY08 Gain	06/30/2008	21		(648)		(677)		(48)
Change in Assumptions	06/30/2009	22		(112)		(116)		(8)
FY09 Loss	06/30/2009	22		408		422		28
Change in Assumptions	06/30/2010	23		120		122		8
FY10 Gain	06/30/2010	23		(328)		(334)		(22)
FY11 Loss	06/30/2011	24		143		144		10
Change in Assumptions	06/30/2012	25		3,085		3,085		194
FY12 Gain	06/30/2012	25		(622)		(622)		(39)
Total					\$	1,913	\$	114

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 16.780702.

The amortization method is level percentage of pay.

The equivalent single amortization period is 28.

Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - Others (\$'s in 000's)

Normal Cost Rate	cupational Death & isability	-	Retiree Medical	Total		
(1) Total Normal Cost	\$ \$ 1,728		8,416	\$	10,144	
(2) DCR Plan Member Salaries Projected for FY13	609,874		609,874		609,874	
(3) Employer Normal Cost Rate, (1) / (2)	0.28%		1.38%		1.66%	
Past Service Rate						
(1) Accrued Liability	\$ 678	\$	40,236	\$	40,914	
(2) Valuation Assets	 6,562		14,259 <sup>1</sup>		20,821	
(3) Total Unfunded Liability, (1) - (2)	\$ (5,884)	\$	25,977	\$	20,093	
(4) Funded Ratio based on Valuation Assets	967.8%		35.4%		50.9%	
(5) Past Service Cost Amortization Payment	\$ (388)	\$	1,626	\$	1,238	
(6) DCR Plan Member Salaries Projected for FY13	609,874		609,874		609,874	
(7) Past Service Cost Rate, (5) / (6)	(0.06)%		0.27%		0.21%	
Total Employer Contribution Rate	0.22%		1.65%		1.87%	

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

## Total Employer Contribution Rate as Percent of Total Payroll

(1) Total Normal Cost	\$ 1,728	\$ 8,416	\$ 10,144
(2) Total DB and DCR Plan Member Salaries Projected for FY13	1,973,653	1,973,653	1,973,653
(3) Employer Normal Cost Rate, (1) / (2)	0.09%	0.43%	0.52%
(4) Past Service Cost Amortization Payment	\$ (388)	\$ 1,626	\$ 1,238
(5) Past Service Cost Rate, (4) / (2)	(0.02)%	0.08%	0.06%
(6) Total Employer Contribution Rate, (3) + (5)	0.07%	0.51%	0.58%

<sup>&</sup>lt;sup>1</sup> Allocated based on retiree medical accrued liability.



Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - Others (cont'd) (\$'s in 000's)

### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

	Amortizat	ion Period	 Bala				
Charge	Date Created	Years Left	Initial		standing		nning-of- Payment
Initial Unfunded Liability	06/30/2007	20	\$ (40)	\$	(43)	\$	(3)
FY08 Gain	06/30/2008	21	(318)		(334)		(23)
Change in Assumptions	06/30/2009	22	(92)		(95)		(7)
FY09 Gain	06/30/2009	22	(1,924)		(1,989)		(135)
Change in Assumptions	06/30/2010	23	24		25		2
FY10 Gain	06/30/2010	23	(994)		(1,018)		(67)
FY11 Gain	06/30/2011	24	(1,184)		(1,197)		(77)
FY12 Gain	06/30/2012	25	(1,233)		(1,233)		(78)
Total				\$	(5,884)	\$	(388)

#### Schedule of Past Service Cost Amortizations - Retiree Medical

	Amortizat	ion Period	Bala				
Charge	Date Created	Years Left	Initial		standing	_	inning-of- r Payment
Initial Unfunded Liability	06/30/2007	20	\$ (335)	\$	(352)	\$	(25)
Change in Assumptions	06/30/2008	21	165		173		12
FY08 Gain	06/30/2008	21	(702)		(732)		(51)
Change in Assumptions	06/30/2009	22	(122)		(126)		(8)
FY09 Gain	06/30/2009	22	(438)		(453)		(30)
Change in Assumptions	06/30/2010	23	(572)		(584)		(39)
FY10 Loss	06/30/2010	23	579		590		39
FY11 Loss	06/30/2011	24	820		830		53
Change in Assumptions	06/30/2012	25	25,180		25,180		1,584
FY12 Loss	06/30/2012	25	1,451		1,451		91
Total				\$	25,977	\$	1,626



Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - Others (cont'd) (\$'s in 000's)

#### Schedule of Past Service Cost Amortizations - Total

	Amortizati	on Period	Balances					
Charge	Date Created	Years Left		Initial Outstanding				eginning-of- ear Payment
Initial Unfunded Liability	06/30/2007	20	\$	(375)	\$	(395)	\$	(28)
Change in Assumptions	06/30/2008	21		165		173		12
FY08 Gain	06/30/2008	21		(1,020)		(1,066)		(74)
Change in Assumptions	06/30/2009	22		(214)		(221)		(15)
FY09 Gain	06/30/2009	22		(2,362)		(2,442)		(165)
Change in Assumptions	06/30/2010	23		(548)		(559)		(37)
FY10 Gain	06/30/2010	23		(415)		(428)		(28)
FY11 Gain	06/30/2011	24		(364)		(367)		(24)
Change in Assumptions	06/30/2012	25		25,180		25,180		1,584
FY12 Loss	06/30/2012	25		218		218		13
Total					\$	20,093	\$	1,238

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 16.230210. The amortization method is level percentage of pay.

The equivalent single amortization period is 26.

Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - All Members (\$'s in 000's)

Normal Cost Rate		cupational Death & isability	-	Retiree Medical	Total		
(1) Total Normal Cost	\$ 2,490		\$	9,380	\$	11,870	
(2) DCR Plan Member Salaries Projected for FY13		675,976		675,976		675,976	
(3) Employer Normal Cost Rate, (1) / (2)		0.37%		1.39%		1.76%	
Past Service Rate							
(1) Accrued Liability	\$	2,412	\$	44,509	\$	46,921	
(2) Valuation Assets		9,142		15,773		24,915	
(3) Total Unfunded Liability, (1) - (2)	\$	(6,730)	\$	28,736	\$	22,006	
(4) Funded Ratio based on Valuation Assets		379.0%		35.4%		53.1%	
(5) Past Service Cost Amortization Payment	\$	(446)	\$	1,798	\$	1,352	
(6) DCR Plan Member Salaries Projected for FY13		675,976		675,976		675,976	
(7) Past Service Cost Rate, (5) / (6)		(0.07)%		0.27%		0.20%	
Total Employer Contribution Rate		0.30%		1.66%		1.96%	

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

## Total Employer Contribution Rate as Percent of Total Payroll

(1) Total Normal Cost	\$ 2,490	\$ 9,380	\$ 11,870
(2) Total DB and DCR Plan Member Salaries Projected for FY13	2,245,686	2,245,686	2,245,686
(3) Employer Normal Cost Rate, (1) / (2)	0.11%	0.42%	0.53%
(4) Past Service Cost Amortization Payment	\$ (446)	\$ 1,798	\$ 1,352
(5) Past Service Cost Rate, (4) / (2)	(0.02)%	0.08%	0.06%
(6) Total Employer Contribution Rate, (3) + (5)	0.09%	0.50%	0.59%

Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - All Members (cont'd) (\$'s in 000's)

### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

	Amortization Period			Bala					
Charge	Date Created	Years Left		Initial	Out	standing	Beginning-of- Year Payment		
Initial Unfunded Liability	06/30/2007	20	\$	(140)	\$	(148)	\$	(11)	
FY08 Gain	06/30/2008	21		(904)		(945)		(66)	
Change in Assumptions	06/30/2009	22		(196)		(203)		(14)	
FY09 Gain	06/30/2009	22		(1,478)		(1,528)		(104)	
Change in Assumptions	06/30/2010	23		103		106		7	
FY10 Gain	06/30/2010	23		(1,276)		(1,306)		(86)	
FY11 Gain	06/30/2011	24		(1,111)		(1,124)		(72)	
FY12 Gain	06/30/2012	25		(1,582)		(1,582)		(100)	
Total					\$	(6,730)	\$	(446)	

#### Schedule of Past Service Cost Amortizations - Retiree Medical

	Amortizat	Amortization Period			Balances					
Charge	Date Created	Years Left		Initial		standing		inning-of- r Payment		
Initial Unfunded Liability	06/30/2007	20	\$	(356)	\$	(375)	\$	(27)		
Change in Assumptions	06/30/2008	21		182		190		13		
FY08 Gain	06/30/2008	21		(764)		(798)		(56)		
Change in Assumptions	06/30/2009	22		(130)		(134)		(9)		
FY09 Gain	06/30/2009	22		(476)		(492)		(33)		
Change in Assumptions	06/30/2010	23		(531)		(543)		(36)		
FY10 Loss	06/30/2010	23		533		544		36		
FY11 Loss	06/30/2011	24		890		901		58		
Change in Assumptions	06/30/2012	25		28,265		28,265		1,778		
FY12 Loss	06/30/2012	25		1,178		1,178		74		
Total					\$	28,736	\$	1,798		



Section 1.2 (cont'd)

## Actuarial Contributions - FY15 - All Members (cont'd) (\$'s in 000's)

#### Schedule of Past Service Cost Amortizations - Total

	Amortizati	on Period	Bala	_			
Charge	Date Created	Years Left	Initial Outstanding				inning-of- Payment
Initial Unfunded Liability	06/30/2007	20	\$ (496)	\$	(523)	\$	(38)
Change in Assumptions	06/30/2008	21	182		190		13
FY08 Gain	06/30/2008	21	(1,668)		(1,743)		(122)
Change in Assumptions	06/30/2009	22	(326)		(337)		(23)
FY09 Gain	06/30/2009	22	(1,954)		(2,020)		(137)
Change in Assumptions	06/30/2010	23	(428)		(437)		(29)
FY10 Gain	06/30/2010	23	(743)		(762)		(50)
FY11 Gain	06/30/2011	24	(221)		(223)		(14)
Change in Assumptions	06/30/2012	25	28,265		28,265		1,778
FY12 Gain	06/30/2012	25	(404)		(404)		(26)
Total				\$	22,006	\$	1,352

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 16.276627. The amortization method is level percentage of pay.

The equivalent single amortization period is 26.

Section 1.3

## Actuarial Gain/(Loss) for FY12 (\$'s in 000's)

	Occupational Death & Disability		Retir	ee Medical	Total
(1) Expected Actuarial Accrued Liability					
(a) Accrued Liability, June 30, 2011	\$	1,949	\$	11,302	\$ 13,251
(b) Normal Cost for FY12		1,981		2,784	4,765
(c) Interest on (a) and (b) at 8.00%		314		1,127	1,441
(d) Benefit Payments for FY12		47		0	47
(e) Interest on (d) at 8.00% for One-half year		2		0	2
(f) Change in Assumptions		0		28,265	 28,265
(g) Expected Accrued Liability as of June 30, 2012 (a) + (b) + (c) - (d) - (e) + (f)	\$	4,195	\$	43,478	\$ 47,673
(2) Actual Accrued Liability, June 30, 2012		2,412		44,509	 46,921
(3) Liability Gain/(Loss), (1)(g) – (2)	\$	1,783	\$	(1,031)	\$ 752
(4) Expected Actuarial Asset Value					
(a) Actuarial Asset Value, June 30, 2011	\$	7,049	\$	12,009	\$ 19,058
(b) Interest on (a) at 8.00%		564		961	1,525
(c) Employer Contributions for FY12		1,590		2,850	4,440
(d) Interest on (c) at 8.00% for one-half year		62		112	174
(e) Benefit Payments for FY12		47		0	47
(f) Interest on (e) at 8.00% for one-half year		2		0	2
(g) Expected Actuarial Asset Value, June 30, 2012 (a) + (b) + (c) + (d) - (e) - (f)	\$	9,216	\$	15,932	\$ 25,148
(5) Actuarial Asset Value, June 30, 2012		9,142		15,773	 24,915
(6) Actuarial Asset Gain/(Loss), (5) - (4)(g)	\$	(74)	\$	(159)	\$ (233)
(7) Actuarial Gain/(Loss), (3) + (6)	\$	1,709	\$	(1,190)	\$ 519
(8) Effect of the 2-Year Delay on Contributions	\$	(127)	\$	12	\$ (115)
(9) FY12 Gain/(Loss) to be Amortized, (7) + (8) <sup>1</sup>	\$	1,582	\$	(1,178)	\$ 404

<sup>&</sup>lt;sup>1</sup> Gain/(loss) is allocated between Peace Officer/Firefighter and Others based on actual unfunded liability.



### Section 1.4

## History of UAAL and Funded Ratio (\$'s in 000's)

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)
June 30, 2007	\$ 759	\$ 1,255	165.3%	\$ (496)
June 30, 2008	\$ 2,018	\$ 4,007	198.6%	\$ (1,989)
June 30, 2009	\$ 4,316	\$ 8,613	199.6%	\$ (4,297)
June 30, 2010	\$ 8,038	\$ 13,568	168.8%	\$ (5,530)
June 30, 2011	\$ 13,251	\$ 19,058	143.8%	\$ (5,807)
June 30, 2012	\$ 46,921	\$ 24,915	53.1%	\$ 22,006

**Section 2** 

**Plan Assets** 



### Section 2.1

## Summary of Fair Value of Assets (\$'s in 000's)

As of June 30, 2012	Occupational Death & Disability		Retiree Medical		Total air Value	Allocation Percent
Cash and Short-Term Investments						
- Cash and Cash Equivalents	\$	214	\$ 383	\$	<u>597</u>	2.5%
- Subtotal	\$	214	\$ 383	\$	597	2.5%
Fixed Income Investments						
- Domestic Fixed Income Pool	\$	973	\$ 1,679	\$	2,652	10.9%
- International Fixed Income Pool		203	350		553	2.3%
- High Yield Pool		239	412		651	2.7%
- Treasury Inflation Protection Pool		107	184		291	1.2%
- Emerging Debt Pool		67	 <u>115</u>		182	0.8%
- Subtotal	\$	1,589	\$ 2,740	\$	4,329	17.9%
Equity Investments						
- Domestic Equity Pool	\$	2,601	\$ 4,485	\$	7,086	29.2%
- International Equity Pool		1,436	2,477		3,913	16.2%
- Private Equity Pool		871	1,502		2,373	9.8%
- Emerging Markets Equity Pool		<u>466</u>	 803		1,269	5.2%
- Subtotal	\$	5,374	\$ 9,267	\$	14,641	60.4%
Other Investments						
- Real Estate Pool	\$	804	\$ 1,387	\$	2,191	9.0%
- Other Investments Pool		533	919		1,452	6.0%
- Absolute Return Pool		373	642		1,015	4.2%
- Other Assets		0	 0		0	0.0%
- Subtotal	\$	1,710	\$ 2,948	\$	<u>4,658</u>	19.2%
Total Cash and Investments	\$	8,887	\$ 15,338	\$	24,225	100.0%
Net Accrued Receivables		<u>115</u>	 213		328	
Net Assets	\$	9,002	\$ 15,551	\$	24,553	
Peace Officer/Firefighter	\$	2,540	N/A		N/A	
Others		6,462	 N/A		N/A	
All Members	\$	9,002	\$ 15,551	\$	24,553	



### Section 2.2

## Changes in Fair Value of Assets (\$'s in 000's)

Fiscal Year 2012	upational & Disability	Retir	ee Medical	Total Fair Value		
(1) Net Assets, June 30, 2011						
(fair value)	\$ 7,301	\$	12,423	\$	19,724	
(2) Additions:						
(a) Member Contributions	\$ 8	\$	0	\$	8	
(b) Employer Contributions	1,582		2,850		4,432	
(c) Interest and Dividend Income	190		329		519	
(d) Net Appreciation (Depreciation) in						
Fair Value of Investments	(32)		(51)		(83)	
(e) Other	 0		0		0	
(f) Total Additions	\$ 1,748	\$	3,128	\$	4,876	
(3) Deductions:						
(a) Medical Benefits	\$ 0	\$	0	\$	0	
(b) Death & Disability Benefits	47		0		47	
(c) Investment Expenses	0		0		0	
(d) Administrative Expenses	 0		0		0	
(e) Total Deductions	\$ 47	\$	0	\$	47	
(4) Net Assets, June 30, 2012						
(fair value)	\$ 9,002	\$	15,551	\$	24,553	
Approximate Fair Value Investment Return						
Rate During FY12 Net of All Expenses	1.9%		2.0%		2.0%	

### Section 2.3

## Actuarial Value of Assets (\$'s in 000's)

The actuarial value of assets and the fair value were \$0 at June 30, 2006. Future investment gains and losses will be recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

In Thousands	Occupational Death & Disability			Retiree Medical	Total	
(1) Deferral of Investment Return/(Loss) for FY12		•				
(a) Fair Value, June 30, 2011	\$	7,301	\$	12,423	\$ 19,724	
(b) Contributions for FY12		1,590		2,850	4,440	
(c) Benefit Payments for FY12		47		0	47	
(d) Actual Investment Return (net of expenses)		158		278	436	
(e) Expected Return Rate (net of expenses)		8.00%		8.00%	8.00%	
(f) Expected Return		645		1,106	1,751	
(g) Investment Gain/(Loss) for the Year $(df.)$		(487)		(828)	(1,315)	
(h) Deferred Investment Return/(Loss)		(140)		(222)	(362)	
(2) Actuarial Value, June 30, 2012						
(a) Fair Value, June 30, 2012	\$	9,002	\$	15,551	\$ 24,553	
(b) 2012 Deferred Investment Return/(Loss)		(140)		(222)	(362)	
(c) Preliminary Actuarial Value, June 30, 2012 (a b.)		9,142		15,773	24,915	
(d) Upper Limit: 120% of Fair Value, June 30, 2012		10,802		18,661	N/A	
(e) Lower Limit: 80% of Fair Value, June 30, 2012		7,202		12,441	N/A	
(f) Actuarial Value, June 30, 2012 (c. limited by d. and e.)	\$	9,142	\$	15,773	\$ 24,915	
(g) Ratio of Actuarial Value of Assets to Fair Value of Assets		101.6%		101.4%	101.5%	
(h) Approximate Actuarial Value Investment Return Rate During FY12 Net of All Expenses		7.0%		6.8%	6.9%	
(3) Actuarial Value Allocation*						
(a) Peace Officer/Firefighter	\$	2,580		N/A	N/A	
(b) Others		6,562		N/A	 N/A	
(c) All Members	\$	9,142	\$	15,773	\$ 24,915	

<sup>\*</sup>Allocated using fair value of assets



Section 2.3 (cont'd)

## Actuarial Value of Assets (\$'s in 000's)

The tables below show the development of gain/(loss) to be recognized in the current year.

#### **Occupational Death & Disability**

			•		,				
Plan Year Ended	Asset C	Sain/(Loss)	Recogn	Gain/(Loss) Recognized in Prior Years		n/(Loss) nized This Year	Gain/(Loss) Deferred to Future Years		
6/30/2008	\$	(102)	\$	(81)	\$	(21)	\$	0	
6/30/2009		(441)		(264)		(88)		(89)	
6/30/2010		(47)		(18)		(9)		(20)	
6/30/2011		599		120		120		359	
6/30/2012		(487)		0		(97)		(390)	
Total	\$	(478)	\$	(243)	\$	(95)	\$	(140)	

#### **Retiree Medical**

Plan Year Ended	Asset Gain/(Loss)		Recogn	Gain/(Loss) Recognized in Prior Years		n/(Loss) Inized This Year	Gain/(Loss) Deferred to Future Years		
6/30/2008	\$	(288)	\$	(231)	\$	(57)	\$	0	
6/30/2009		(809)		(486)		(162)		(161)	
6/30/2010		(108)		(44)		(22)		(42)	
6/30/2011		1,073		215		215		643	
6/30/2012		(828)		0		(166)		(662)	
Total	\$	(960)	\$	(546)	\$	(192)	\$	(222)	

#### Total

Plan Year Ended	Asset Gain/(Loss)		Recogn	Gain/(Loss) Recognized in Prior Years		n/(Loss) gnized This Year	Gain/(Loss) Deferred to Future Years		
6/30/2008	\$	(390)	\$	(312)	\$	(78)	\$	0	
6/30/2009		(1,250)		(750)		(250)		(250)	
6/30/2010		(155)		(62)		(31)		(62)	
6/30/2011		1,672		335		335		1,002	
6/30/2012		(1,315)		0		(263)		(1,052)	
Total	\$	(1,438)	\$	(789)	\$	(287)	\$	(362)	



### Section 2.4

### **Historical Asset Rate of Return**

	Actua	rial Value	Fair Value			
Year Ending	Annual	Cumulative	Annual	Cumulative		
June 30, 2008	5.0%	5.0%	(7.1)%	(7.1)%		
June 30, 2009	2.4%	3.7%	(13.0)%	(10.1)%		
June 30, 2010	3.9%	3.8%	6.6%	(4.8)%		
June 30, 2011	7.3%	4.6%	19.2%	0.7%		
June 30, 2012	6.9%	5.1%	2.0%	0.9%		

## **Section 3**

**Accounting Information** 

Section 3.1

ΙΙΔΔΙ ας α

## Schedule of Funding Progress (\$'s in 000's)

The exhibit below shows the death and disability plan disclosure under GASB No. 25.

	Actuarial Accrued Liabilities (AAL)	Actuarial Value of Assets	Funded Ratio	U	Infunded AAL (UAAL)	Co	overed Payroll	Percentage of Covered Payroll
June 30, 2012	\$ 2,412	\$ 9,142	379.0%	\$	(6,730)	\$	558,760	(1.2)%
June 30, 2011	1,949	7,049	361.7%		(5,100)		459,521	(1.1)%
June 30, 2010	853	4,801	562.8%		(3,948)		421,187	(0.9)%
June 30, 2009	403	3,138	778.7%		(2,735)		314,118	(0.9)%
June 30, 2008	242	1,288	532.2%		(1,046)		203,955	(0.5)%
June 30, 2007	48	188	391.7%		(140)		105,611	(0.1)%

The exhibit below shows the retiree medical disclosure without regard to Medicare Part D under GASB No. 43.

	 rial Accrued lities (AAL)	Actuarial Value of Assets	Funded Ratio	Uı	nfunded AAL (UAAL)	Co	vered Payroll	UAAL as a Percentage of Covered Payroll
June 30, 2012	\$ 51,798	\$ 15,773	30.5%	\$	36,025	\$	558,760	6.4%
June 30, 2011	13,142	12,009	91.4%		1,133		459,521	0.2%
June 30, 2010	8,370	8,767	104.7%		(397)		421,187	(0.1)%
June 30, 2009	4,594	5,475	119.2%		(881)		314,118	(0.3)%
June 30, 2008	2,123	2,719	128.1%		(596)		203,955	(0.3)%
June 30, 2007	803	1,067	132.9%		(264)		105,611	(0.2)%



### Section 3.2

## Schedule of Employer Contributions (\$'s in 000's)

The following shows the death and disability plan disclosure under GASB No. 25 for fiscal year ending 2007 and later.

Fiscal Year Ending	Annual Required Contribution (ARC	
June 30, 2012	\$ 1,085	146%
June 30, 2011	\$ 1,852	100%
June 30, 2010	\$ 1,495	100%
June 30, 2009	\$ 1,787	100%
June 30, 2008	\$ 1,063	100%
June 30, 2007	\$ 181	100%

The following shows the retiree medical disclosure without regard to Medicare Part D subsidy under GASB No. 43 for fiscal year ending 2007 and later.

Fiscal Year Ending	l Required ution (ARC)	Percentage of ARC Contributed	
June 30, 2012	\$ 3,464	82%	
June 30, 2011	\$ 3,229	78%	
June 30, 2010	\$ 3,469	87%	
June 30, 2009	\$ 3,152	85%	
June 30, 2008	\$ 1,845	85%	
June 30, 2007	\$ 1,028	100%	

The exhibit below shows the annual required contribution (ARC) as a percentage of pay.

#### ARC (% of Pay)

Valuation Date	Fiscal Year	Occupational Death & Disability (PF / Others)	Retiree Medical	Total (PF / Others)		
N/A	FY07	0.40% / 0.30%	1.75%	2.15% / 2.05%		
N/A	FY08	1.33% / 0.58%	1.17%	2.50% / 1.75%		
N/A	FY09	1.33% / 0.58%	1.17%	2.50% / 1.75%		
June 30, 2007	FY10	1.33% / 0.30%	0.95%	2.28% / 1.25%		
June 30, 2008	FY11	1.18% / 0.31%	0.68%	1.86% / 0.99%		
June 30, 2009	FY12	0.97% / 0.11%	0.62%	1.59% / 0.73%		
June 30, 2010	FY13	0.99% / 0.14%	0.57%	1.56% / 0.71%		
June 30, 2011	FY14	1.14% / 0.20%	0.58%	1.72% / 0.78%		
June 30, 2012	FY15	1.06% / 0.22%	1.95%	3.01% / 2.17%		



Section 3.3

#### **Notes to Trend Data**

### Actuarial Assumptions, Methods and Additional Information Under GASB

Valuation Date	June 30, 2012				
Actuarial Cost Method	Entry Age Normal				
	Level Percentage of Pay Normal Cost Basis for Occupational Death & Disability				
	Level Dollar Normal Cost Basis for Retiree Medical				
Amortization Method	Level Percent of Pay, closed with bases established annually				
Equivalent Single Amortization Period	26 years				
Asset Valuation Method	5-year smoothed market, constrained to 80% / 120% of fair value corridor				
Actuarial Assumptions:					
Investment rate of return*	8.00%				
Projected salary increases	Police Officer/Firefighter: Merit – 2.74% per year for the first 4 years of employment, grading down to 0.5% at 4 years and thereafter.				
	Productivity – 0.5% per year. Inflation – 3.12% per year.				
	Others: Merit – 5.98% per year grading down to 1.99% after 5 years; for more than 6 years of service, 1.49% grading down to 0%.				
	Productivity – 0.5% per year. Inflation – 3.12% per year.				
*Includes price inflation at	3.12%				

GASB 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

The State of Alaska Public Employees' Retirement System DCR Plan's retiree medical benefits are fully funded. Therefore, the 8.00% discount rate used for GASB 25 reporting is also applied herein for GASB 43 reporting.

Based on GASB accounting rules, the retiree drug subsidy the State of Alaska receives under Medicare Part D has not been recognized for GASB 43 disclosure purposes.

Disregarding future Medicare Part D payments, the fiscal 2014 employer ARC for accounting purposes is 1.95% of pay for retiree medical benefits and 2.25% of pay for retiree medical and death & disability benefits combined.



#### Section 3.4

## Solvency Test (\$'s in 000's)

The exhibit below shows the combined occupational death & disability and retiree medical solvency test for valuation dates June 30, 2010 and before.

Valuation Date		Aggregate Accrued Liability For:						Portion of Accrued Liabilities Covered by Assets			
	(1) Active Member Contributions		(2) Inactive Members		(3) Active Members (Employer- Financed Portion)		Valuation Assets		(1)	(2)	(3)
June 30, 2010 <sup>1</sup>	\$	0	\$	0	\$	8,038	\$	13,568	100.0%	100.0%	100.0%
June 30, 2009 <sup>1</sup>		0		0		4,316		8,613	100.0%	100.0%	100.0%
June 30, 2008 <sup>1</sup>		0		0		2,018		4,007	100.0%	100.0%	100.0%
June 30, 2007		0		0		759		1,255	100.0%	100.0%	100.0%
June 30, 2006		0		0		0		0	N/A	N/A	N/A

Retiree medical liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

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<sup>&</sup>lt;sup>1</sup> Change in Assumptions **buck**consultants

Section 3.4 (cont'd)

## Solvency Test (\$'s in 000's)

The exhibit below shows the occupational death & disability solvency test for valuation dates June 30, 2006 and later.

0

0

#### **Occupational Death & Disability Portion of Accrued Liabilities Aggregate Accrued Liability For: Covered by Assets** (1) (2) (3) **Active Members** Occupational Death & Disability Inactive (Employer-Valuation **Active Member Members Financed** Valuation Date **Contributions** (1) (2) (3) Portion) **Assets** \$ 0 \$ 0 \$ \$ June 30, 2012 2,412 9,142 100.0% 100.0% 100.0% June 30, 2011 0 0 1.949 100.0% 100.0% 7.049 100.0% June 30, 2010<sup>1</sup> 0 0 853 4,801 100.0% 100.0% 100.0% June 30, 2009<sup>1</sup> 0 0 403 3,138 100.0% 100.0% 100.0% 1,288 June 30, 2008 0 0 242 100.0% 100.0% 100.0% 100.0% June 30, 2007 0 0 48 188 100.0% 100.0%

0

0

N/A

June 30, 2006



N/A

N/A

<sup>&</sup>lt;sup>1</sup> Change in Assumptions

Section 3.4 (cont'd)

## Solvency Test (\$'s in 000's)

The exhibit below shows the retiree medical solvency test for valuation dates June 30, 2006 and later.

	Aggre	tiree Medical Accrued Liab		or:				of Accrued vered by As	
Valuation Date	 (1) re Member tributions	(2) Inactive Members	Ac	(3) ctive Members (Employer- Financed Portion)	_	Retiree Medical Valuation Assets	(1)	(2)	(3)
June 30, 2012 <sup>1</sup>	\$ 0	\$ 0	\$	44,509	\$	15,773	100.0%	100.0%	35.4%
June 30, 2011	0	0		11,302	\$	12,009	100.0%	100.0%	100.0%
June 30, 2010 <sup>1</sup>	0	0		7,185	\$	8,767	100.0%	100.0%	100.0%
June 30, 2009 <sup>1</sup>	0	0		3,913	\$	5,475	100.0%	100.0%	100.0%
June 30, 2008 <sup>1</sup>	0	0		1,776	\$	2,719	100.0%	100.0%	100.0%
June 30, 2007	0	0		711	\$	1,067	100.0%	100.0%	100.0%
June 30, 2006	0	0		0		0	N/A	N/A	N/A

Retiree medical liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

Change in Assumptions

**buck**consultants

**Section 4** 

**Member Data** 

#### Section 4.1

#### **Summary of Members Included**

As of June 30		2008	2009	2010	2011	2012
Peace Officer/Firefighter – Active Memb	ers					
(1) Number		390	585	650	770	909
(2) Average Age		33.04	33.55	33.86	34.23	34.36
(3) Average Credited Service		0.94	1.42	2.12	2.54	2.91
(4) Average Entry Age		32.10	32.13	31.74	31.69	31.45
(5) Average Annual Earnings	\$	51,023	\$ 56,617	\$ 60,467	\$ 65,769	\$ 68,440
Others - Active Members						
(1) Number		4,662	6,671	8,582	10,195	11,688
(2) Average Age		37.36	38.04	38.55	39.10	39.69
(3) Average Credited Service		0.91	1.28	1.64	1.98	2.32
(4) Average Entry Age		36.45	36.76	36.91	37.12	37.37
(5) Average Annual Earnings	\$	39,480	\$ 42,122	\$ 44,498	\$ 46,439	\$ 48,504
Total – Active Members						
(1) Number		5,052	7,256	9,232	10,965	12,597
(2) Average Age		37.03	37.68	38.22	38.76	39.31
(3) Average Credited Service		0.91	1.29	1.67	2.02	2.36
(4) Average Entry Age		36.12	36.39	36.55	36.74	36.95
(5) Average Annual Earnings	\$	40,371	\$ 43,291	\$ 45,622	\$ 47,796	\$ 49,943
Retirees, Disableds and Beneficiaries						
(1) Number		0	0	0	1	1
(2) Average Age		N/A	N/A	N/A	N/A	N/A
(3) Average Monthly Death & Disability Benefit		N/A	N/A	N/A	N/A	N/A
Inactive Members*						
(1) Number		5	3	7	4	36
Total Number of Members		5,057	7,259	9,239	10,970	12,634

<sup>\*</sup>Inactive members are not eligible for future benefits from the Plan.

Average annual earnings are the annualized earnings for the fiscal year ending on the valuation date.



#### Section 4.2

#### Age and Service Distribution of Active Members - Total PERS

#### **Annual Earnings by Age**

#### **Annual Earnings by Credited Service**

		Total Annual	Average Annual	Years of		Total Annual	Average Annual
Age	Number	Earnings	Earnings	Service	Number	Earnings	Earnings
0 – 19	54	\$ 2,122,355	\$ 39,303	0	3,632	\$ 163,912,379	\$ 45,130
20 - 24	1,081	45,837,974	42,403	1	2,691	127,227,052	47,279
25 - 29	2,287	112,220,346	49,069	2	2,054	100,968,992	49,157
30 - 34	1,981	105,387,788	53,199	3	1,780	94,229,857	52,938
35 - 39	1,680	85,575,322	50,938	4	1,449	82,604,424	57,008
40 - 44	1,456	71,462,374	49,081	0 – 4	11,606	568,942,704	49,021
45 – 49	1,366	67,158,235	49,164	5 – 9	989	60,105,925	60,774
50 – 54	1,218	62,045,959	50,941	10 – 14	2	79,779	39,890
55 – 59	866	45,123,947	52,106	15 – 19	0	0	0
60 - 64	436	23,585,239	54,095	20 - 24	0	0	0
65 – 69	134	6,682,086	49,866	25 – 29	0	0	0
70 – 74	35	1,661,748	47,479	30 - 34	0	0	0
75+	3	265,035	88,345	35 – 39	0	0	0
			_	40+	0	0	0
Total	12,597	\$629,128,408	\$ 49,943	Total	12,597	\$ 629,128,408	\$ 49,943

#### Years of Credited Service by Age

				Years	of Servic	е				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0 – 19	54	0	0	0	0	0	0	0	0	54
20 - 24	1,072	9	0	0	0	0	0	0	0	1,081
25 - 29	2,157	130	0	0	0	0	0	0	0	2,287
30 - 34	1,817	164	0	0	0	0	0	0	0	1,981
35 - 39	1,529	151	0	0	0	0	0	0	0	1,680
40 - 44	1,318	138	0	0	0	0	0	0	0	1,456
45 – 49	1,247	118	1	0	0	0	0	0	0	1,366
50 - 54	1,102	116	0	0	0	0	0	0	0	1,218
55 – 59	773	92	1	0	0	0	0	0	0	866
60 - 64	388	48	0	0	0	0	0	0	0	436
65 - 69	113	21	0	0	0	0	0	0	0	134
70 – 74	33	2	0	0	0	0	0	0	0	35
75+	3	0	0	0	0	0	0	0	0	3
						•			•	-
Total	11,606	989	2	0	0	0	0	0	0	12,597

Total annual earnings are the annualized earnings for the fiscal year ending on the valuation date.



#### Section 4.3

#### **Member Data Reconciliation - Total PERS**

	Actives	Vested Inactive	Retired	Disabled	Beneficiary	Total
Total as of July 1, 2011	10,965	4	0	0	1	10,970
Vested Termination	(32)	32	0	0	0	0
Non-vested Termination	(1,319)	0	0	0	0	(1,319)
Refund of Contributions	(512)	0	0	0	0	(512)
Disabled	0	0	0	0	0	0
Retired	0	0	0	0	0	0
Deceased, No Beneficiary	(9)	0	0	0	0	(9)
Deceased, With Beneficiary	0	0	0	0	0	0
Return to Active	196	0	0	0	0	196
Data Adjustment	167	0	0	0	0	167
New Entrant	3,141	0	0	0	0	3,141
Total as of July 1, 2012	12,597	36	0	0	1	12,634



#### Section 4.4

#### Schedule of Active Member Valuation Data - Total PERS

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2012	12,597	\$ 629,128	\$ 49,943	4.5%	160
June 30, 2011	10,965	524,088	47,796	4.8%	160
June 30, 2010	9,232	421,187	45,622	5.4%	160
June 30, 2009	7,256	314,118	43,291	7.2%	160
June 30, 2008	5,052	203,955	40,371	8.1%	159
June 30, 2007	2,827	105,611	37,358	0.0%	160
June 30, 2006	0	0	0	0.0%	0

Annual earnings are the annualized earnings for the fiscal year ending on the valuation date.



#### **Section 5**

Basis of the Actuarial Valuation

Section 5.1

# **Summary of Plan Provisions** and Changes in Plan Provisions

#### (1) Effective Date

July 1, 2006, with amendments through June 30, 2012.

#### (2) Administration of Plan

The Commissioner of Administration or the Commissioner's designee is the administrator of the Plan. The Attorney General of the state is the legal counsel for the Plan and shall advise the administrator and represent the Plan in legal proceedings.

The Alaska Retirement Management Board prescribes policies, adopts regulations, invests the funds, and performs other activities necessary to carry out the provisions of the Plan.

#### (3) Employers Included

Currently there are 160 employers participating in the PERS DCR Plan, including the State of Alaska, and 159 political subdivisions and public organizations.

#### (4) Membership

An employee of a participating employer who first enters service on or after July 1, 2006, or a member of the defined benefit plan who works for an employer who began participation on or after July 1, 2006, and meets the following criteria is a member in the Plan:

- Permanent full-time or part-time employees of the State of Alaska, participating political subdivisions or public organizations. An employee must be regularly scheduled to work 30 or more hours per week to be considered full-time by the PERS. An employee must be regularly scheduled to work 15 or more hours per week but less than 30 hours to be considered a part-time employee for PERS purposes.
- Elected state officials.
- Elected municipal officials who are compensated and receive at least \$2,001.00 per month.

Members can convert to the DCR Plan if they are an eligible nonvested member of the PERS defined benefit plan whose employer consents to transfers to the defined contribution plan and they elect to transfer his or her account balance to the PERS DCR Plan.



Section 5.1 (cont'd)

# **Summary of Plan Provisions** and Changes in Plan Provisions

#### (5) Member Contributions

There are no member contributions for the occupational death & disability and retiree medical benefits.

#### (6) Retiree Medical

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal
  retirement eligibility is the earlier of a) 30 years of service for Others members and 25 years of
  service for Peace Officer/Firefighter members, or b) Medicare eligible and 10 years of service.
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until they are Medicare eligible.
- Coverage cannot be denied except for failure to pay premium.
- Members who are receiving disability benefits or survivors who are receiving monthly survivor benefits are not eligible until the member meets, or would have met if he/she had lived, the normal retirement eligibility requirements.
- The plan's coverage is supplemental to Medicare.
- The Medicare-eligible premium will be based on the member's years of service. The percentage of premium paid by the member is as follows:

Years of Service	Percent of Premium Paid by Member
Less than 15 years	30%
15 – 19	25%
20 – 24	20%
25 – 29	15%
30 years or more	10%

Section 5.1 (cont'd)

# **Summary of Plan Provisions** and Changes in Plan Provisions

#### (7) Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- There is no increase in the benefit after commencement.
- Member earns service while on occupational disability.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service for Others members or 25 years of service for Peace Officer/Firefighter members.
- Peace Officer/Firefighter members may select the defined contribution account or the monthly benefit payable as if they were retiring under Tier 3 (service continues during disability, final average salary is as of date of disability).
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

#### (8) Occupational Death Benefits

- Benefit is 40% of salary for Others members and 50% of salary for Peace Officer/Firefighter members.
- There is no increase in the benefit after commencement.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

#### **Changes Since the Prior Valuation**

There have been no changes in benefit provisions since the prior valuation.



Section 5.2

## Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

#### Valuation of Liabilities

#### (A) Actuarial Method – Entry Age Actuarial Cost

Liabilities and contributions shown in the report are computed using the Entry Age Actuarial Cost method of funding. Any funding surpluses or unfunded accrued liability is amortized over 25 years as a level percentage of expected payroll. Payroll is assumed to increase by the payroll growth assumption per year for this purpose. However, in keeping with GASB requirements, the net amortization period will not exceed 30 years.

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death & disability benefits (constant dollar amount for retiree medical benefits), from the assumed entry age to the last age with a future benefit were applied to the projected benefits to determine the normal cost (the portion of the total cost of the Plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total DCR Plan payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the Plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for beneficiaries and disability members currently receiving benefits (if any) was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

#### (B) Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method will be phased in over five years. Fair Value of Assets were \$0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.



Section 5.2 (cont'd)

## Description of Actuarial Methods and Valuation Procedures

#### (C) Valuation of Retiree Medical Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 6.2(c) of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2012.

Due to the lack of experience for the DCR Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2012 for PERS with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, FY12 claims costs were reduced 11.9% for medical and 7.1% for prescription drugs. Retiree out-of-pocket amounts were indexed 0.2% each year to reflect the effect of the deductible leveraging on trend and other plan design features.

No implicit subsidies are assumed. Employees projected to retire with 30 years of service prior to Medicare (25 years for PERS peace officer/firefighter) are valued with commencement deferred to Medicare eligibility, as such members will be required to pay the full plan premium. Explicit subsidies for disabled and normal retirement are determined using the plan-defined percentages of total projected plan costs, again with no implicit subsidy assumed.

#### **Healthcare Reform**

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to the following provisions; however, none of the impacts have been included in the valuation results. Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We did look at the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the time of disclosure Buck estimated the year in which the tax would potentially affect Alaska to be sufficiently far into the future to produce a minimal impact. Buck determined the impact to be immaterial based on a blend of pre-Medicare and Medicare retirees.

We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

#### **Changes in Methods Since the Prior Valuation**

There have been no changes in methods since the prior valuation.



#### Section 5.3

## Summary of Actuarial Assumptions and Changes in Assumptions

The demographic and economic assumptions used in the June 30, 2012 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2010. These assumptions were the result of an experience study performed for the DB Plan as of June 30, 2009.

Investment Return / Discount Rate	8.00% per year (geometric), compounded annually, net of expenses.				
Salary Scale	Inflation – 3.12% per year.				
	Productivity $-0.5\%$ per year.				
	See Table 1 for salary scale rates.				
Payroll Growth	3.62% per year. (Inflation + Productivity).				
Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.				
Mortality (Pre-termination)*	Peace Officer/Firefighter:  Based upon the 2005-2009 actual mortality experience of the PERS  DB Plan (see Table 2). 80% of the 1994 Group Annuity Mortality  (GAM) Table, 1994 Base Year without margin projected to 2013  using Projection Scale AA for males and 60% for females.  Others:  Based upon the 2005-2009 actual mortality experience of the PERS  DB Plan (see Table 3). 75% of the 1994 GAM Table, 1994 Base  Year without margin projected to 2013 using Projection Scale AA  for males and 55% for females.  Deaths are assumed to be occupational 75% of the time for Peace  Officer/Firefighter, 55% of the time for Others.				
Mortality (Post-termination)*	1994 GAM Table, 1994 Base Year without margin projected to 2013 using Projection Scale AA for males and with one-year set-forward for females. (See Table 4.)				
Turnover	Select rates were estimated and ultimate rates were set to the PERS DB Plan's rates loaded by 10%. (See Table 5.)				
Disability	Incidence rates based upon the 2005-2009 actual experience of the PERS DB Plan, in accordance with Table 6. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table. Disabilities are assumed to be occupational 75% of the time for Peace Officer/ Firefighter, 55% of the time for Others.				
Retirement	Retirement rates were estimated in accordance with Table 7.				
Marriage and Age Difference	Wives are assumed to be three years younger than husbands. 80% of male members and 70% of female members are assumed to be married.				
Part-time Status	Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.65 years of credited service per year for Other members.				

<sup>\*</sup>The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2010 with an Actual Deaths to Expected Deaths ratio of 109%.



#### Section 5.3 (cont'd)

## Summary of Actuarial Assumptions and Changes in Assumptions

Expenses	All expenses are net of the investment return assumption.				
Per Capita Claims Cost	Sample claims cost rates adjusted to age 65 for FY13 medical benefits are shown below:				
			Prescription		
		Medical	Drugs		
	Pre-Medicare	\$ 9,856	\$ 2,736		
	Medicare Parts A & B	\$ 1,628	\$ 2,736		
	Medicare Part B Only \$ 6,219 \$ 2,736				
	Medicare Part D	N/A	\$ 535		
Third Party Administrator Fees	\$163.52 per person per year	; assumed trend ra	te of 5% per year.		
Base Claims Costs Adjustments	Due to higher initial copays, deductibles, out-of-pocket limits and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:				
	• 0.881 for the medical plan.				
	• 0.929 for the prescription drug plan.				
	• 0.998 for the annual indexing of member cost sharir				

#### Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

Health Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 9.0% is applied to the FY13 pre-Medicare medical claims costs to get the FY14 medical claims costs.

	Medical	Medical	Prescription
	Pre-65	Post-65	Drugs
FY13	9.0%	6.5%	6.4%
FY14	8.7%	6.4%	6.3%
FY15	8.5%	6.3%	6.2%
FY16	8.0%	6.3%	6.2%
FY17	7.5%	6.2%	6.1%
FY18	7.0%	6.1%	6.0%
FY19	6.6%	6.1%	5.8%
FY25	6.0%	6.0%	5.8%
FY50	5.0%	5.0%	5.0%
FY100	4.5%	4.5%	4.5%

For the June 30, 2012 valuations and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model effectively begins estimating trend amounts beginning in 2012 and projects out to 2100. The model has been populated with assumptions that are specific to the State of Alaska. The model asks the user to input estimated baseline costs for year 2015. Using this value as the base cost, the model projects per-person expenditures and growth rates through 2100 using a set of equations and assumptions developed by the author with the assistance of an SOA working group. The user can then use the model input cells to specify alternative assumptions regarding responsiveness to external trends, income growth, and other factors to arrive at alternative projections. The model provisionally uses default short term annual projected by CMS for years 2011-2015 (4% to 6%), but users may input their own estimates for these model years. In this model, cost controls can be simulated in two ways: by specifying a Share Restriction Point, a percentage of GDP represented by healthcare and above which the current trends will be reduced; or by specifying a limit year after which the rate of growth in health care costs will be reduced to match the rate of growth

#### Section 5.3 (cont'd)

## Summary of Actuarial Assumptions and Changes in Assumptions

in per capita income (as both CMS and CBO assume). While this model is not directly applicable, it was used for a reference point in the ultimate pharmacy trend. We set pharmacy trend based upon recent plan and industry experience and grade down slowly in the select period (similar to post-65 medical trend) to an ultimate trend rate based upon what we are seeing for medical trend and consistent within the industry.

The following table compares plan-specific inputs and the model's baseline assumptions for key assumptions as of June 30, 2012:

		Alaska-Spe	cific Values
		Pre-	
	Base Line	Medicare	Medicare
Key Assumption	Value	Medical	Medical
HCCTR 2012-2013	4.6%	9.0%	6.1%
HCCTR 2013-2014	7.4%	8.0%	5.8%
HCCTR 2014-2015	5.0%	7.0%	5.5%
2015 GDP % of	19.20/	17.9%	17.9%
healthcare	18.3%	17.9%	17.9%
2015 PCCC	\$10,000	\$10,295	\$2,596
CPI	2.5%	2.5%	2.5%
Real GDP	1.7%	1.5%	1.5%
Income Multiplier	1.40	1.30	1.30
Taste/Technology	1.1%	1.1%	1.1%
Max GDP as % of	25.00/	25.00/	25.00/
healthcare	25.0%	25.0%	25.0%
Year reached	2075	2075	2075

Future (2026+) assumptions for inflation (2.4% for 2026-3025 and 2.3% thereafter), real GDP (1.5%), income multiplier (1.05 for 2026-3025 and 1.00 thereafter) and technology (0.9% for 2026-3025 and 0.8% thereafter) were not changed from the baseline inputs.

Aging Factors			Prescription
	Age	Medical	Drugs
	0-44	2.0%	4.5%
	45-54	2.5%	3.5%
	55-64	3.5%	3.0%
	65-73	4.0%	1.5%
	75-83	1.5%	0.5%
	85-93	0.5%	0.0%
	94+	0.0%	0.0%



Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

Retiree Medical Participation

<b>Decrement Due to Disability</b>		Decrem	ent Due to	Retirement
<u>Age</u>	Percent Participation	<u>Age</u>	<u>Percen</u>	<u>it Participation</u>
< 56	73.00%	55		40.0%
56	77.50%	56		50.0%
57	79.75%	57		55.0%
58	82.00%	58		60.0%
59	84.25%	59		65.0%
60	86.50%	60		70.0%
61	88.75%	61		75.0%
62	91.00%	62		80.0%
63	93.25%	63		85.0%
64	95.50%	64		90.0%
65+	94.00%	65+	Years of Sy	<u>/c</u>
			<15	70.5%
			15-19	75.2%
			20-24	79.9%
			25-29	89.3%
			30+	94.0%

<sup>\*</sup>Updated participation rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market.

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

#### Table 1 Alaska PERS DCR Plan Salary Scale

#### **Peace Officer/Firefighter:**

Year of Employment	Percent Increase
1-4	6.36%
5	6.11
6	5.61
7+	4.12

#### Others:

Year of Employment	<b>Percent Increase</b>
1	9.60%
2	7.60
3	6.61
4	6.11
5	5.61
6+	Age-based

Rates vary slightly by age after 6 years of employment.

Age	Percent Increase
25	<b>7.11</b> 0/
25	5.11%
30	4.99
35	4.86
40	4.70
45	4.53
50	4.61
55	4.24
60+	3.62

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

Table 2
Alaska PERS Peace Officer/Firefighter DCR Plan
Mortality Table (Pre-termination)

Mortality Table (Pre-termination)					
<u>Age</u>	<u>Male</u>	<b>Female</b>			
20	0.0303%	0.0135%			
21	0.0323	0.0133			
22	0.0345	0.0135			
23	0.0380	0.0138			
24	0.0419	0.0141			
25	0.0470	0.0144			
26	0.0534	0.0151			
27	0.0569	0.0155			
28	0.0590	0.0161			
29	0.0609	0.0170			
30	0.0627	0.0187			
31	0.0642	0.0207			
32	0.0656	0.0220			
33	0.0663	0.0229			
34	0.0664	0.0239			
35	0.0666	0.0250			
36	0.0674	0.0262			
37	0.0697	0.0277			
38	0.0721	0.0295			
39	0.0753	0.0316			
40	0.0792	0.0344			
41	0.0837	0.0372			
42	0.0890	0.0400			
43	0.0943	0.0425			
44	0.0997	0.0447			
45	0.1059	0.0462			
46	0.1133	0.0481			
47	0.1226	0.0508			
48	0.1331	0.0551			
49	0.1445	0.0598			
50	0.1571	0.0665			
51	0.1716	0.0745			
52	0.1883	0.0856			
53	0.2100	0.0978			
54	0.2331	0.1111			
55	0.2644	0.1270			
56	0.3015	0.1474			
57	0.3466	0.1712			
58	0.3989	0.1970			
59	0.4489	0.2266			
60	0.5050	0.2604			

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

# Table 3 Alaska PERS Others DCR Plan Mortality Table (Pre-termination)

	,	,
Age	<u>Male</u>	<u>Female</u>
20	.0284%	.0123%
21	.0303	.0122
22	.0324	.0123
23	.0356	.0127
24	.0392	.0129
25	.0441	.0132
26	.0501	.0138
27	.0533	.0142
28	.0553	.0148
29	.0571	.0156
30	.0588	.0171
31	.0602	.0189
32	.0615	.0202
33	.0622	.0210
34	.0623	.0219
35	.0624	.0229
36	.0632	.0240
37	.0653	.0254
38	.0676	.0271
39	.0706	.0289
40	.0742	.0315
41	.0785	.0341
42	.0834	.0366
43	.0884	.0389
44	.0935	.0409
45	.0993	.0423
46	.1063	.0441
47	.1149	.0466
48	.1248	.0505
49	.1354	.0548
50	.1473	.0610
51	.1609	.0683
52	.1765	.0784
53	.1969	.0897
54	.2186	.1018
55	.2479	.1164
56	.2827	.1352
57	.3249	.1570
58	.3739	.1806
59	.4208	.2077
60	.4734	.2387

Section 5.3 (cont'd)

# **Summary of Actuarial Assumptions and Changes in Assumptions**

# Table 4 Alaska PERS DCR Plan Mortality Table (Post-termination)

<u>Age</u>	<u>Male</u>	<b>Female</b>
50	0.1964%	0.1241%
51	0.2145	0.1426
52	0.2354	0.1631
53	0.2625	0.1851
54	0.2914	0.2117
55	0.3305	0.2457
56	0.3769	0.2854
57	0.4333	0.3284
58	0.4986	0.3777
59	0.5611	0.4339
60	0.6312	0.4979
61	0.7251	0.5701
62	0.8188	0.6527
63	0.9436	0.7450
64	1.0644	0.8442
65	1.1956	0.9476
66	1.3618	1.0523
67	1.5123	1.1499
68	1.6336	1.2424
69	1.7873	1.3422
70	1.9147	1.4342
71	2.0940	1.5830
72	2.2981	1.7260
73	2.5175	1.9177
74	2.7475	2.0940
75	3.0609	2.3377
76	3.0609	2.6690
77	3.7879	2.9853
78	4.2924	3.3273
79	4.8681	3.7068
80	5.5102	4.1355
81	6.2135	4.6249
82	6.9722	5.1616
83	7.6164	5.7377
84	8.4319	6.4966
85	9.1495	7.3658

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

# Table 5 Alaska PERS DCR Plan Turnover Assumptions

**Peace Officer/Firefighter:** 

Select Rates of Turnover During the First 5 Years of Employment

	<b>,</b>
Year of	
<b>Employment</b>	Rate
1	15%
2	12%
3	10%
4	9%
5	8%

Ultimate Rates of Turnover After the First 5 Years of Employment

Age	Male	Female	Age	Male	Female
20	4.5263%	5.7054%	45	4.1616%	5.3309%
21	4.5208	5.7028	46	4.1102	5.2844
22	4.5147	5.7002	47	4.0500	5.2300
23	4.5076	5.6979	48	3.9838	5.1703
24	4.4983	5.6939	49	3.9139	5.1088
25	4.4904	5.6920	50	3.8376	5.0419
26	4.4829	5.6893	51	3.7480	4.9627
27	4.4729	5.6818	52	3.6377	4.8621
28	4.4651	5.6751	53	3.5111	4.7458
29	4.4561	5.6656	54	3.3711	4.6171
30	4.4492	5.6574	55	3.2063	4.4617
31	4.4410	5.6467	56	2.9998	4.2580
32	4.4349	5.6376	57	2.7433	3.9959
33	4.4286	5.6264	58	2.4705	3.7140
34	4.4237	5.6148	59	2.1189	3.3355
35	4.4169	5.6007	60	1.7240	2.9081
36	4.4088	5.5856	61	1.2905	2.4421
37	4.3959	5.5672	62	0.7855	1.9006
38	4.3798	5.5474	63	0.2146	1.2892
39	4.3615	5.5260	64	4.7520	0.6289
40	4.3413	5.5039	65+	4.7520	5.9400
41	4.3175	5.4794			
42	4.2869	5.4494			
43	4.2525	5.4167			
44	4.2106	5.3772			



Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

# Table 5 Alaska PERS DCR Plan Turnover Assumptions

Others:

Select Rates of Turnover During the First 5 Years of Employment

Year of		
<b>Employment</b>	Rate	_
1	29%	
2	25%	
3	20%	
4	16%	
5	15%	

Ultimate Rates of Turnover After the First 5 Years of Employment

After the First 5 Years of Employment					
Age	Male	Female	Age	Male	Female
20	10.4500%	15.0446%	45	5.7664%	6.6418%
21	10.4500	15.0442	46	5.7411	6.6260
22	10.4500	15.0424	47	5.7110	6.6061
23	10.4500	15.0421	48	5.6759	6.5825
24	10.4500	15.0407	49	5.6397	6.5591
25	10.4500	15.0407	50	5.5982	6.5318
26	10.4500	15.0403	51	5.5505	6.5002
27	10.4500	15.0379	52	5.4941	6.4620
28	10.4500	15.0346	53	5.4300	6.4184
29	10.4500	15.0307	54	5.3605	6.3716
30	10.4500	13.8600	55	5.2807	6.3160
31	9.9000	13.0900	56	5.1834	6.2432
32	9.2400	12.2100	57	5.0650	6.1491
33	8.5030	11.5500	58	4.9352	6.0429
34	8.0850	10.8900	59	4.7792	5.9079
35	7.7000	10.2300	60	4.6045	5.7553
36	7.3700	9.5700	61	4.4089	5.5858
37	7.0950	9.1300	62	4.1829	5.3912
38	6.8750	8.6900	63	3.9259	5.1701
39	6.7100	8.3600	64	3.6453	4.9289
40	6.4900	8.0818	65+	6.0500	6.8750
41	6.3030	8.0705			
42	6.1050	8.0578			
43	5.9290	8.0461			
44	5.7966	8.0325			

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

# Table 6 Alaska PERS DCR Plan Disability Table

<u>Age</u>	Peace Officer/ <u>Firefighter</u> ge <u>Rate</u>		mber Rate Female
20	0000	0210/	02.40/
20	.088%	.031%	.024%
21	.089	.031	.024
22	.090	.032	.024
23	.091	.032	.024
24	.093	.033	.025
25	.094	.033	.025
26	.095	.033	.025
27	.098	.034	.026
28	.100	.035	.027
29	.103	.036	.028
30	.105	.037	.029
31	.108	.037	.029
32	.110	.038	.029
33	.113	.039	.030
34	.116	.041	.031
35	.120	.042	.032
36	.124	.044	.034
37	.129	.045	.035
38	.134	.047	.036
39	.139	.048	.037
40	.144	.050	.039
41	.150	.052	.040
42	.159	.056	.043
43	.170	.059	.045
44	.185	.065	.050
45	.203	.071	.055
46	.220	.077	.059
47	.239	.083	.064
48	.259	.091	.070
49	.279	.097	.075
50	.300	.105	.081
51	.325	.114	.087
52	.358	.125	.096
53	.398	.139	.107
54	.444	.155	.119
55	.500	.175	.134
56	.574	.201	.155
57	.668	.234	.180
58	.763	.267	.205
59	.900	.315	.242
60	1.054	.368	.283
00	1.037	.500	.203

Section 5.3 (cont'd)

## Summary of Actuarial Assumptions and Changes in Assumptions

Table 7 Alaska PERS DCR Plan Retirement Table

Age	Rate
<55	2%
55-59	3%
60	5%
61	5%
62	10%
63	5%
64	5%
65	25%
66	25%
67	25%
68	20%
69	20%
70	100%

Section 5.3 (cont'd)

# Summary of Actuarial Assumptions and Changes in Assumptions

#### **Changes in Actuarial Assumptions Since the Prior Valuation**

There have been changes in actuarial assumptions since the prior valuation regarding healthcare cost trend rates and the DCR retiree medical plan adjustments. The updated healthcare cost trend assumption reflects differences in Medicare eligible and non-Medicare eligible medical costs, maintains a distinct prescription drug cost trend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated member contributions to reflect the new non-Medicare and pharmacy benefit cost trend on a weighted average basis.

To account for anticipated plan design features, FY12 claims costs adjustments were changed from 5.9% for medical and 0.7% for prescription drugs to 11.9% and 7.1% respectively. Retiree out-of-pocket amounts were indexed 0.2% each year, compared to 4.8% last year. Participation rates were reduced to reflect the proportion of retirees expected to have access to alternative options in the Medicare market as well as the time from retirement to Medicare-eligibility where a member pays full cost.



#### Glossary of Terms

Actuarial Accrued Liability Total accumulated cost to fund pension benefits arising from service in

all prior years.

Actuarial Cost Method Technique used to assign or allocate, in a systematic and consistent

manner, the expected cost of a pension plan for a group of plan members to the years of service that give rise to that cost.

Actuarial Present Value of Projected Benefits

Amount which, together with future interest, is expected to be sufficient

to pay all future benefits.

Actuarial Valuation Study of probable amounts of future pension benefits and the necessary

amount of contributions to fund those benefits.

Actuary Person who performs mathematical calculations pertaining to pension

and insurance benefits based on specific procedures and assumptions.

Annual Required Contribution Disclosure measure of annual pension cost.

GASB 25 and 27 Governmental Accounting Standards Board Statement Number 25

which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 27 which specifies Employer reporting of

Pension Cost.

GASB 43 and 45 Governmental Accounting Standards Board Statement Number 43

which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 45 which specifies Employer reporting of

Other Post-Employment Benefit (OPEB) Cost.

Liquidity Factor Is calculated as the average annual Fair Value of Assets divided by the

total annual benefit payments. This measures the approximate number of years that assets will cover benefit payments without contributions or

investment return. Trend shows solvency risk.

Maturity Ratio The ratio of the actuarial accrued liability for members who are no

longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and

losses.

Normal Cost That portion of the actuarial present value of benefits assigned to a

particular year in respect to an individual member or the plan as a

whole.

Unfunded Actuarial Accrued

Liability (UAAL)

The portion of the actuarial accrued liability not offset by plan assets.

Vested Benefits Benefits which are unconditionally guaranteed regardless of

employment status

